

publication date of January 26, 1989. The Examiner cited the Long reference under 35 U.S.C. §102(a) as anticipating the present invention. For knowledge or use to qualify as prior art under 35 U.S.C. §102(a), it must have been accessible to the public. Carella v. Starlight Archery & Pro Line Co., 804 F.2d 135; 231 U.S.P.Q. 644 (C.A.F.C. 1986). The effective date of a reference under 35 U.S.C. §102(a) is the date the reference is publicly available, in this instance, January 26, 1989, the date of international publication. The claimed subject matter of the above-identified application has support which dates to the filing of the original, grandparent application, Serial No. 07/241,410. Accordingly, the filing date of the grandparent application of the present application antedates the Long reference. Therefore, Applicant requests that the Examiner withdraw the rejections which rely on the Long reference.

Applicant has not admitted that Long may be a prior art reference. The mention in Applicant's Amendment and Response of May 20, 1991, on page 5 that "... Applicant discussed with the Examiner possible amendments to the claims to distinguish the present invention from the cited prior art references, particularly the Long reference" merely points out that the Examiner had cited the Long reference as prior art under 35 U.S.C. §102(a) and does not constitute an admission that Long is a proper prior art reference. A prior art admission must be an explicit statement, that as to the Applicant, the reference at issue is prior art to the Applicant.

Applicant further states that not only is the Long reference not prior art, but also the Long reference does not anticipate the present invention. It is axiomatic that for prior art to anticipate under 35 U.S.C. §102 it has to meet every element of the claimed invention. Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367; 231 U.S.P.Q. 81 (C.A.F.C. 1986). Applicant

respectfully submits that not every element of the present claimed invention is met by the Long reference. For example, the present invention claims a food product comprising a source of omega-3 highly unsaturated fatty acids comprising microorganisms of the order Thraustochytriales and feed material. Long discloses and claims extracted omega-3 fatty acids for use in food. Applicant submits that use of the microorganisms themselves in a food product is a novel, nonobvious and material element of the present claimed invention and not a matter of judicious selection on the part of the ordinary artisan as contended by the Examiner and previously refuted by the Applicant in the Amendment and Response of May 20, 1991.

Applicant submits that the removal of the Long reference cited by the Examiner obviates the Examiner's 35 U.S.C. §103 rejections for obviousness which are principally based on the Long reference. In addition to the removal of the Long reference, Applicant reiterates all of the arguments with respect to the 35 U.S.C. §103 rejection set forth in the Amendment and Response of May 20, 1991, as supported by the Declaration of William R. Barclay. Applicant notes that all of the claims now pending are directed toward either a food product comprising food material and microorganisms of the order Thraustochytriales or a food product comprising food material and omega-3 highly unsaturated fatty acids extracted from microorganisms of the order Thraustochytriales or microorganisms of the order Thraustochytriales, wherein the microorganisms have been cultured in a low salinity medium. To summarize Applicant's arguments advanced in the Amendment and Response of May 20, 1991, Applicant again respectfully submits that none of the references cited by the Examiner teach or suggest the use of microorganisms of the order Thraustochytriales as a source of omega-3 highly unsaturated fatty acids in admixture with food material. Applicant further submits that none of the references cited by the Examiner

teach the use of omega-3 highly unsaturated fatty acids extracted from microorganisms of the order Thraustochytriales or microorganisms of the order Thraustochytriales as a source of omega-3 highly unsaturated fatty acids in admixture with food material, wherein the microorganisms have been cultured in a low salinity medium. As such, Applicant submits that the present invention is novel and non-obvious and that the claims, as amended, are in condition for allowance.

Objection to the Disclosure

The Examiner objected to the disclosure and stated that Claim 8 was improperly amended because of the use of double underlining. Applicant notes that Claim 8 has been canceled and rewritten as Claim 65.

Objection to the Specification under 35 U.S.C. §112, first paragraph

The Examiner objected to the specification under 35 U.S.C. §112, first paragraph, because the specification as originally filed does not provide support for the invention as is now claimed. The Examiner stated that there is no support for a number of the changes made to the specification in the previous Amendment and Response of May 20, 1991. Applicant notes that the proper basis for rejection of an amendment to the abstract, specification or drawings as new matter is 35 U.S.C. §132 and not 35 U.S.C. §112 which is the proper basis for rejection of claim amendments as being without support in the original disclosure. In re Rasmussen, 650 F.2d 1212; 211 U.S.P.Q. 323 (C.C.P.A. 1981). Among the changes objected to by the Examiner as appearing to be the introduction of new matter are the following:

- 1) The deletion of "C22:5w3" and the insertion of "C22:6w3" therefor on page 33, lines 2 and 7. Applicant notes that this is merely the correction of a typographical error to properly denote

by the shorthand method discussed in the specification at page 10, line 9 to page 11, line 2 the proper shorthand notation for docosahexaenoic acid (DHA) as "C22:6w3".

2) The insertion of "added to a fermentation medium prior to harvesting" in amended Claim 4. Applicant notes that this amendment of Claim 4 has literal support in the specification at page 19, lines 21-24.

3) The Examiner objected to the addition of Claim 53 in regard to the recitation of "to manipulate the resistance of the omega-3 highly unsaturated fatty acids to oxidation." Applicant notes that Claim 53, as presently amended, recites that the product is extruded "to help prevent oxygen from readily reaching the omega-3 highly unsaturated fatty acids." Literal support for Claim 53, as amended, can be found in the specification at page 21, lines 33-38.

4) The Examiner objected to the sodium concentration recited in Claims 54, 55, 58 and 59. Applicant reiterates, as stated in the Amendment and Response submitted on May 20, 1991, that these sodium concentrations correspond to the X-axis data points plotted in Figure 7 which can be obtained by interpretation of the graph. In determining what is disclosed, consideration cannot be restricted to the major part of the disclosure; applicant is entitled to have the whole of his disclosure considered. In re Anderson, 471 F.2d 1237; 176 U.S.P.Q. 331 (C.C.P.A. 1973). Accordingly, Applicant is entitled to have Figure 7 considered as part of the whole of his disclosure and the utilization of Figure 7 to support claim amendments does not constitute new matter.

Applicant respectfully submits that all of the above amendments to the specification are not new matter and maintains that entry of the same is proper.

The Examiner has also objected to other amendments to the specification and the drawings submitted with the Amendment and

Response of May 20, 1991. Applicant maintains that these amendments are proper, are to correct typographical errors and do not affect the support and enablement of the specification and claims and are not new matter as contended by the Examiner. However, in order to advance prosecution, Applicant presently amends the specification to remove the additional previous amendments objected to by the Examiner and to restore the following portions to the terminology as originally filed: page 16, line 8; page 54, line 36; page 55, line 2; page 62, line 21; and Figure 6.

Rejection of Claims 4, 53-56 and 58-64 under 35 U.S.C. §112, first paragraph

The Examiner rejected Claims 4, 53-56 and 58-64 under 35 U.S.C. §112, first paragraph, for the reasons set forth in the objection to the specification. Applicant notes that Claims 4, 53-55, 58 and 59 have been amended and that Claims 56 and 61-64 have been canceled. Accordingly, Applicant reiterates the arguments set forth above with respect to the objection to the specification for Claims 4, 53-55, 58 and 59; specifically, Claim 4 has literal support in the specification at page 19, lines 21-24, Claim 53 has literal support in the specification at page 21, lines 33-38 and the sodium concentrations recited in Claims 54, 55, 58 and 59 have support in the X-axis data points plotted in Figure 7 which can be obtained by interpretation of the graph. Therefore, Applicant respectfully submits that Claim 4 is allowable and that the amendments to Claims 53-55, 58 and 59 obviate the Examiner's rejection. The Examiner set forth no objection to Claim 60 in the objection to the specification nor did the Examiner set forth any reason why Claim 60 is rejected under 35 U.S.C. §112, first paragraph. Therefore, Applicant submits that Claim 60 is allowable.

Objection to the Specification under 35 U.S.C. §112, first paragraph

The Examiner objected to the specification under 35 U.S.C. §112, first paragraph, as failing to provide an enabling disclosure. Specifically, the Examiner stated that it is not clear whether or not the microbial strains disclosed in the specification meet the criteria of M.P.E.P. 608.01(p)(c). Applicant notes that all of the assurances requested by the Examiner were previously provided during prosecution of the grandparent application, Serial No. 07/241,410, in the Amendment and Response of September 15, 1989. In order to comply with the Examiner's request for assurances that the deposited strains meet the criteria of M.P.E.P. 608.01(p)(c), Applicant submits herewith copies of the relevant pages of the Amendment and Response of September 15, 1989, and a copy of the deposit receipt from the American Type Culture Collection at the time of deposit of the microorganisms set forth in the above-identified application.

Rejection of Claims 57, 61 and 64 under 35 U.S.C. §112, first paragraph

The Examiner rejected Claims 57, 61 and 64 under 35 U.S.C. §112, first paragraph, for the reasons set forth in the objection to the specification. Applicant notes that Claims 57, 61 and 64 have been canceled and as such the Examiner's 35 U.S.C. §112, first paragraph rejection is obviated.

Rejection of Claims 56 and 62-64 under 35 U.S.C. §112, first paragraph

The Examiner has rejected Claims 56 and 62-64 under 35 U.S.C. §112, first paragraph. Applicant notes that Claims 56 and 62-64 have been canceled and, therefore, the Examiner's 35 U.S.C. §112, first paragraph, rejection is obviated.

Rejection of Claims 1-4, 6-8 and 55-64 under 35 U.S.C. §112, second paragraph

The Examiner has rejected Claims 1-4, 6-8 and 55-64 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Applicant notes that Claims 56, 57 and 61-64 have been canceled and as such the Examiner's rejection under 35 U.S.C. §112, second paragraph, is obviated with respect to those claims.

The Examiner stated that in Claim 1, the recitation of "a source of omega-3 highly unsaturated fatty acids comprising microorganisms" is vague and indefinite and that it is unclear what is meant by the recitation as the use of the open terminology "comprising" renders the metes and bounds of the claim indeterminable. Ex parte Davis and Tuukkanen, 80 U.S.P.Q. 448 (Pat. Off. Board of Appeals 1948), established that "comprising" is synonymous with "including" and that the Primary Examiners of the Patent Office, for their own guidance, adopted a code of terms for use in compositions to aid uniformity of practice, which regarded "comprising" as leaving the claim open for the inclusion of unspecified ingredients even in major amounts. Applicant traverses the Examiner's rejection and submits that the claim is not vague and indefinite for employing the term "comprising," that the term "comprising" is a term of art with a well-defined meaning and that, therefore, the claim is definite.

The Examiner stated that Claim 7 is vague and indefinite in its recitation as it is not clear how the manipulation of bioavailability of omega-3 highly unsaturated fatty acids in a microorganism is accomplished and if such manipulation encompasses an extraction procedure. Applicant notes that Claim 7 has been amended to indicate that the bioavailability is manipulated by the degree of cell rupture. The amendment to Claim 7 has literal

support in the specification at page 22, lines 2-6. An extraction procedure is not indicated nor claimed.

The Examiner stated that Claim 8 is vague and indefinite as there is no antecedent basis for the recitation "said group." Applicant notes that Claim 8 has been canceled, thus, the Examiner's rejection is obviated.

The Examiner rejected Claim 53 and stated that the recitation of "to manipulate the resistance of omega-3 highly unsaturated fatty acids to oxidation" is vague and indefinite. Applicant notes that Claim 53 has been amended and that, as previously discussed, Claim 53, as amended, is literally supported by the specification at page 21, lines 33-38.

The Examiner rejected Claims 54 and 55 as lacking an antecedent basis in the previous claim as the previous claim does not provide for a culturing step. Applicant notes that Claims 54 and 55 have been amended to state that the "microorganisms have been cultured." Claims 54 and 55 therefore recite a further claim limitation wherein the food product incorporates microorganisms which were previously subjected to the stated culture conditions. Applicant further believes that this amendment clarifies that it is the microorganisms, not the food composition, which have been cultured, because the claim reads "wherein said microorganisms have been cultured" (emphasis added).

The Examiner rejected Claim 59 and stated that it is vague and indefinite as it does not appear to further limit the claim upon which it depends. Applicant notes that Claim 59 is the species claim of generic Claim 58. Claim 59 is dependent upon Claim 58 and further defines the sodium concentration of the low salinity medium as being less than about 4.61 g/l. The Examiner rejected Claims 57, 61 and 64 as being vague and indefinite in their recitations of "wherein said microorganisms are selected from the group consisting of microorganisms identified by ATCC Accession Nos. 20888, 20889,

20890, 20891, 20892, mutant strains derived therefrom, and mixtures thereof." Applicant notes that Claims 57, 61 and 64 have been canceled. Applicant further notes that Claims 57 and 61 have been replaced by Claims 66 and 67 which incorporate the claim language suggested by the Examiner to preferably identify the strains by genus, as well as, by accession number and to indicate that the mutant strains are derived from each of the individual parent strains.

Rejection of Claims 1-3, 8 and 54-64 under 35 U.S.C. §103

The Examiner rejected Claims 1-3, 8 and 54-64 under 35 U.S.C. §103 as being unpatentable over Long. Applicant notes that Claims 8, 56 and 62-64 have been withdrawn from consideration. The Examiner stated that the claimed invention is drawn to a food product composition which comprises a source of omega-3 highly unsaturated fatty acids from microorganisms of the order Thraustochytriales. The Examiner took the position that the choice of the form of the omega-3 highly unsaturated fatty acids in terms of whether the whole cell microorganism is used or whether the fatty acids are extracted would have been a matter of judicious selection on the part of the ordinary artisan. The Examiner further took the position that optimization of parameters such as culturing conditions for the microorganisms to be added to the food product is well within the purview of the ordinary artisan absent unexpected results.

Applicant respectfully traverses the Examiner's rejection. Applicant submits that he need not demonstrate unexpected results in order to overcome an obviousness rejection. While an unexpected result may be evidence of nonobviousness, it is not a requirement. Panduit Corp. v. Dennison Mfg. Co., 774 F.2d 1082; 227 U.S.P.Q. 337 (C.A.F.C. 1985). Applicant further submits that an insight (in the present invention, whole cell microorganisms and low salinity

culturing conditions) which is contrary to the understanding and expectations of the art (in the Long reference, extraction of the fatty acids and highly saline culture conditions) points to patentability. Schenk, A.G. v. Norton Corp., 713 F.2d 782; 218 U.S.P.Q. 698 (C.A.F.C. 1983).

Applicant respectfully submits that Claims 1-3, 54, 55, 58-60 and Claims 8, 57 and 61 as replaced by new Claims 65, 66 and 67, respectively, are patentable. First, Applicant respectfully submits that the Long reference is not a proper reference for the reason previously discussed. Accordingly, the Examiner's §103 rejections as based on the Long reference are obviated. Second, despite the impropriety of the Long reference, Applicant reiterates all of his arguments previously set forth in the Amendment and Response of May 20, 1991. In summary of those arguments, Applicant reiterates that none of the references cited by the Examiner teach the use of microorganisms of the order Thraustochytriales as a source of omega-3 highly unsaturated fatty acids in admixture with food material. Neither do any of the references cited by the Examiner teach the use of omega-3 highly unsaturated fatty acids extracted from microorganisms of the order Thraustochytriales or microorganisms of the order Thraustochytriales as a source of omega-3 highly unsaturated fatty acids in admixture with food material, wherein the microorganisms have been cultured in a low salinity medium.

Applicant again reiterates the advantages of the use of whole cell microorganisms of the order Thraustochytriales containing omega-3 highly unsaturated fatty acids which are set forth on page 8, paragraph 2 of the Amendment and Response of May 20, 1991, and as further supported by the Declaration of William R. Barclay, at paragraph 14, submitted therewith. Applicant also reiterates the advantages of the use of omega-3 highly unsaturated fatty acids extracted from microorganisms of the order Thraustochytriales or

microorganisms of the order Thraustochytriales containing omega-3 highly unsaturated fatty acids, wherein the microorganisms have been cultured in a low salinity medium which are set forth on page 9, paragraph 2 of the Amendment and Response of May 20, 1991. Applicant respectfully requests that the Examiner review and reconsider these arguments.

In summary of these arguments, Applicant submits that contrary to the Examiner's assertion that the use of whole cell microorganisms and a low salinity medium are merely optimization of parameters within the purview of the ordinary artisan, that these parameters are not mere optimization. Specifically, the use of whole cell microorganisms avoids the extra expense and effort of extracting the omega-3 highly unsaturated fatty acids from the microorganisms and makes the administration of these fatty acids to the end user more cost efficient and more convenient. Furthermore, each of the references cited by the Examiner had to extract the fatty acids in order to achieve a feasible concentration of the fatty acids for administration to the end user. (See the feeding example set forth at page 8, paragraph 2 of the Amendment and Response of May 20, 1991, as supported by the Declaration of William R. Barclay, paragraph 14.) In addition, neither is the low salinity medium mere optimization of parameters. As previously submitted in the Amendment and Response of May 20, 1991, at page 9, paragraph 2, a low salinity medium is economically advantageous because the corrosive effects of saline waters on metal fermentors and the problems associated with the disposal of saline waters can be avoided or mitigated. Demonstration of commercial advantage is evidence of patentability of the present invention, Graham et al. v. John Deere Company of Kansas City et al., 148 U.S.P.Q. 459 (U.S. S.Ct. 1966), and defeats the Examiner's contention that the low salinity medium is mere optimization of parameters. Applicant again asserts his position set forth in the Amendment and Response

of May 20, 1991, that for the reasons discussed therein and also set forth herein, the references cited by the Examiner teach away from the present invention. Teaching away from the art is a per se demonstration of lack of prima facie obviousness. In re Dow Chemical Co., 837 F.2d 469; 5 U.S.P.Q.2d 1529 (C.A.F.C. 1988). Therefore, Applicant requests that the Examiner withdraw the 35 U.S.C. §103 rejection.

Rejection of Claims 4, 6, 7 and 53 under 35 U.S.C. §103

The Examiner rejected Claims 4, 6, 7, and 53 under 35 U.S.C. §103 as being unpatentable over Long and further in view of Chang et al. and Traitler et al. Applicant respectfully traverses the Examiner's rejection. Applicant reiterates the arguments set forth with respect to Chang et al. and Traitler et al. in the Amendment and Response of May 20, 1991. Applicant also reiterates, as previously discussed, that the Long reference is not a proper reference. Accordingly, the Examiner's principal basis for the 35 U.S.C. §103 rejection, namely, the Long reference, has been removed and, therefore, the Examiner's rejection is obviated.

Rejection of Claims 1-3, 8 and 54-64 under 35 U.S.C. §103

The Examiner rejected Claims 1-3, 8 and 54-64 under 35 U.S.C. §103 as being unpatentable over Ellenbogen et al. taken with Kyle. Applicant respectfully traverses the Examiner's rejection. Applicant notes that Claims 8, 56, 57 and 61-64 have been withdrawn from consideration. The Examiner stated that the instant claims are rejected for reasons of record as stated on page 8 of the last Office Action. The Examiner took the position and conceded that the Ellenbogen et al. reference is not relied upon alone to support a prima facie case of obviousness, but rather it is relied upon to teach that the genera claimed possess the capability of producing omega-3 highly unsaturated fatty acids and

that Kyle is relied upon for the motivation to screen, select, and improve the yield of such fatty acids in microalgal species.

Applicant respectfully traverses the Examiner's rejection. Applicant reiterates all of the arguments with respect to Ellenbogen et al. and Kyle set forth in the Amendment and Response of May 20, 1991. Applicant again submits, as previously discussed, that none of the references cited by the Examiner, including Ellenbogen et al. and Kyle taken together, teach the use of microorganisms of the order Thraustochytriales as a source of omega-3 highly unsaturated fatty acids in a food product or the use of omega-3 highly unsaturated fatty acids extracted from microorganisms of the order Thraustochytriales or microorganisms of the order Thraustochytriales as a source of omega-3 highly unsaturated fatty acids in a food product, wherein the microorganisms have been cultured in a low salinity medium. Applicant again asserts his position set forth in the Amendment and Response of May 20, 1991, for the reasons discussed therein and also set forth herein, that the references cited by the Examiner teach away from the present invention. Teaching away from the art is a per se demonstration of lack of prima facie obviousness. In re Dow Chemical Co., 837 F.2d 469; 5 U.S.P.Q.2d 1529 (C.A.F.C. 1988). Therefore, Applicant requests that the Examiner withdraw the 35 U.S.C. §103 rejection.

Applicant further submits, that as conceded by the Examiner in the Office Action of February 14, 1991, at page 8, that the Ellenbogen et al. reference does not teach the use of microorganisms of the order Thraustochytriales as a source of omega-3 highly unsaturated fatty acids in a food product or the use of omega-3 highly unsaturated fatty acids extracted from microorganisms of the order Thraustochytriales or microorganisms of the order Thraustochytriales as a source of omega-3 highly unsaturated fatty acids in a food product, wherein the

microorganisms have been cultured in a low salinity medium. Applicant further submits that there is no suggestion in the Ellenbogen et al. reference to use these sources of omega-3 highly unsaturated fatty acids in a food product. Applicant reiterates, as stated in the Amendment and Response of May 20, 1991, that obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching suggestion or incentive supporting the combination. In re Geiger, 815 F.2d 686; 2 U.S.P.Q. 2d 1276 (C.A.F.C. 1987). Applicant further submits that the Kyle reference discloses the screening, selecting and improving of the eicosapentaenoic acid yields of several oil-producing microalgal species. Kyle does not teach or suggest the use of microorganisms of the order Thraustochytriales as a source of omega-3 highly unsaturated fatty acids in a food product or the use of omega-3 highly unsaturated fatty acids extracted from microorganisms of the order Thraustochytriales or microorganisms of the order Thraustochytriales as a source of omega-3 highly unsaturated fatty acids in a food product, wherein the microorganisms have been cultured in a low salinity medium.

The Examiner further took the position that Applicant's arguments in regard to Kyle teaching away from the claimed invention are not found persuasive as such parameters discussed are not found in the claims. On the contrary, Applicant submits that he is not required to negatively claim those aspects of the Kyle reference which teach away from the present invention. Applicant has claimed those aspects of the present invention which are novel and nonobvious and which patentably distinguish the present invention from the Kyle reference, namely, the use of microorganisms of the order Thraustochytriales as a source of omega-3 highly unsaturated fatty acids in a food product and the use of omega-3 highly unsaturated fatty acids extracted from microorganisms of the order Thraustochytriales or microorganisms of

the order Thraustochytriales as a source of omega-3 highly unsaturated fatty acids in a food product, wherein the microorganisms have been cultured in a low salinity medium.

Rejection of Claims 4, 6-7 and 53 under 35 U.S.C. §103

The Examiner rejected Claims 4, 6-7 and 53 under 35 U.S.C. §103 as being unpatentable over Ellenbogen et al. taken with Kyle and further in view of Chang et al. and Traitler et al. The Examiner stated that the instant claims are rejected for reasons of record as stated on pages 8 and 9 of the last Office Action.

Applicant respectfully traverses the Examiner's rejection. Applicant reiterates the arguments set forth herein and in the Amendment and Response of May 20, 1991. Applicant reiterates, as previously discussed herein, that none of the references cited by the Examiner teach the use of microorganisms of the order Thraustochytriales as a source of omega-3 highly unsaturated fatty acids in a food product. Furthermore, none of the references cited by the Examiner teach the use of omega-3 highly unsaturated fatty acids extracted from microorganisms of the order Thraustochytriales or microorganisms of the order Thraustochytriales as a source of omega-3 highly unsaturated fatty acids in a food product, wherein the microorganisms have been cultured in a low salinity medium. Applicant submits that neither Chang et al. nor Traitler et al. teach the use of antioxidants in a food product comprising a source of omega-3 highly unsaturated fatty acids comprising microorganisms from the order Thraustochytriales and food material, wherein the antioxidant is added to a fermentation medium prior to harvesting of the microorganisms or added to the food product during post-harvest processing of the microorganisms. Applicant further submits that the teachings of Chang et al. and Traitler et al. to use antioxidants in conjunction with fatty acids does not render the use of antioxidants in conjunction with microorganisms

containing omega-3 highly unsaturated fatty acids obvious. Use of an antioxidant in conjunction with a microorganism is patentably distinguishable from the use of an antioxidant in conjunction with extracted fatty acids.

Applicant submits that neither Chang et al. nor Traitler et al. teach the extrusion of a food product comprising a source of omega-3 highly unsaturated fatty acids comprising microorganisms from the order Thraustochytriales, wherein the food product is extruded to manipulate by degree of cell rupture the bioavailability of omega-3 highly unsaturated fatty acids contained in the microorganisms. Traitler et al. teach extrusion in order to enhance the subsequent solvent extraction of fatty acids from Ribes seeds. In contrast, the present invention is patently distinguishable from Traitler et al. because the present invention teaches and claims extrusion of a food product comprising microorganisms and food material in order to manipulate by degree of cell rupture the bioavailability of omega-3 highly unsaturated fatty acids contained in the microorganisms. Applicant respectfully submits that the teaching by Traitler et al. to use extrusion to enhance the subsequent solvent extraction of fatty acids from seeds does not render obvious the use of extrusion of a food product containing microorganisms in order to manipulate by degree of cell rupture the bioavailability of omega-3 highly unsaturated fatty acids contained in the microorganisms.

Applicant again asserts his position set forth in the Amendment and Response of May 20, 1991, for the reasons discussed therein and also set forth herein, that the references cited by the Examiner teach away from the present invention. Teaching away from the art is a per se demonstration of lack of prima facie obviousness. In re Dow Chemical Co., 837 F.2d 469; 5 U.S.P.Q.2d 1529 (C.A.F.C. 1988). Therefore, Applicant requests that the Examiner withdraw the 35 U.S.C. §103 rejection.

In view of the foregoing amendments and remarks, Applicant submits that all pending claims are in condition for allowance. Consideration of the above and withdrawal of all rejections are hereby requested.

In the previous Amendment and Response of May 20, 1991, Applicant requested an interview with the Examiner prior to the issuance of a final Office Action. This request was appropriate under M.P.E.P. ¶713.01 which states:

Where the response to a first complete action includes a request for an interview or a telephone consultation to be initiated by the Examiner, ... the Examiner, as soon as he or she has considered the effect of the response should grant such a request if it appears that the interview or consultation would result in expediting the case to a final action.

Subsequent to the issuance of the final Office Action, Supervisory Examiner Robinson stated that, because of the number of issues outstanding, an interview at that time would not be appropriate. Applicant has made a diligent effort to obviate or traverse the majority of the objections raised by the Examiner. Applicant has carefully explained why the remaining pending claims are patentably distinguishable from the references cited by the Examiner, as well as, why Long is not an appropriate reference. Therefore, Applicant sincerely believes that the claims are in condition for allowance. However, should the Examiner have any questions or objections, Applicant respectfully requests that the Examiner contact Applicant's attorneys, Michael Tompkins or Brenda Speer, prior to the issuance of an Advisory Action. Because the above-identified application is under expedited procedure, Applicant sincerely believes that such an interview would be appropriate if for any reason the pending claims are not found allowable.


Applicant believes no fees are due pursuant to 37 C.F.R. §1.16 for newly added Claims 65-67, because Applicant has withdrawn from consideration a greater number of claims. However, if Applicant's

belief is incorrect, then please debit any underpayment to Deposit
Account No. 19-1970.

Respectfully submitted,

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